

HP ProLiant ML110 Generation 2 Server Installation Sheet



Read instructions completely before beginning installation procedure.

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HP ProLiant ML110 Generation 2 Server Installation Sheet

First Edition (January 2005)
Part Number 375600-001



375600-001

Configuring the Server

1. Connect all peripherals:
 - Keyboard
 - Mouse
 - Monitor

NOTE: Refer to the HP ProLiant ML110 Generation 2 Server Support CD. Refer to the CD contents for additional information and updates not provided in this installation sheet.

2. Determine the server BIOS version:
 - a. Power up the server.
 - b. Press the **Esc** key at the HP logo screen, then press the **Pause** key to halt screen movement.
 - c. Note the server BIOS version.
 - d. Verify the server BIOS version against the latest BIOS version listed for this server on the HP website:
<http://www.hp.com>
 - e. If you do not have the latest BIOS, update the BIOS now.
Refer to the *HP ProLiant ML110 Generation 2 Server Maintenance and Service Guide* available on the HP website: <http://www.hp.com>

Default Boot Priority

By default, the server searches for boot devices in the following order:

1. Removable device
2. IDE CD-ROM drive
3. Hard disk drive
4. PXE IBA GE slot 0A08 V1219

Identifying Server Components

Front Panel Components

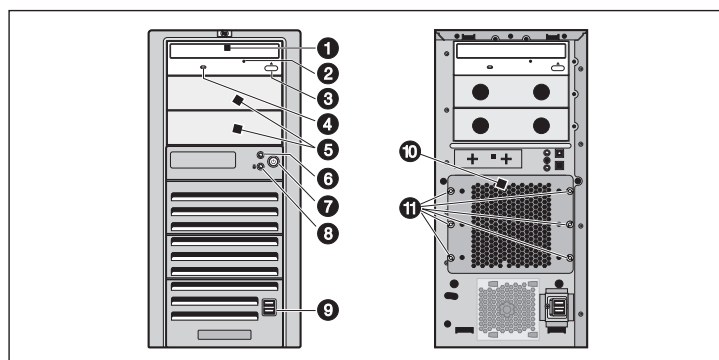


Table 1: Front Panel Components

Item	Description
1	CD-ROM drive
2	CD-ROM drive mechanical eject hole
3	CD-ROM drive eject button
4	CD-ROM drive activity indicator
5	Full-height common bays
6	Dual-color status LED indicator <ul style="list-style-type: none">• Green – Power indicator• Amber – System health indicator

continued

Table 1: Front Panel Components *continued*

Item	Description
7	Power button
8	Drive activity indicator (amber)
9	Front USB 2.0 ports
10	Hard disk drive (HDD) cage
11	Torx screws for the HDD cage

Rear Panel Components

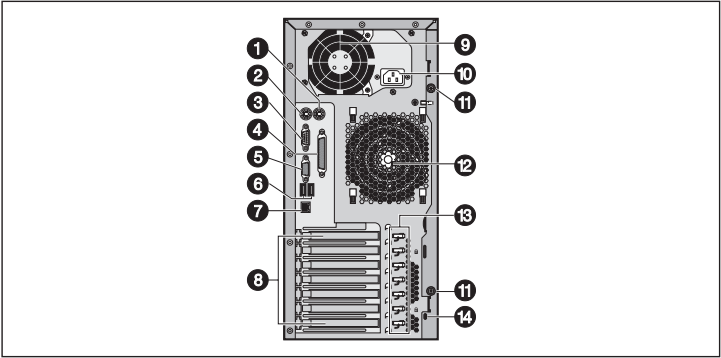


Table 2: Rear Panel Components

Item	Description
1	PS/2 mouse port (green)
2	PS/2 keyboard port (purple)
3	Serial port (teal)
4	Parallel port (burgundy)
5	Monitor port (blue)
6	Rear USB 2.0 ports (black)
7	LAN port (RJ-45)
8	PCI slot covers
9	PSU fan
10	Power supply cable socket
11	Thumbscrews for the access panel
12	System fan
13	Retention clips for the PCI slot covers
14	Kensington lock notch

System Board Components

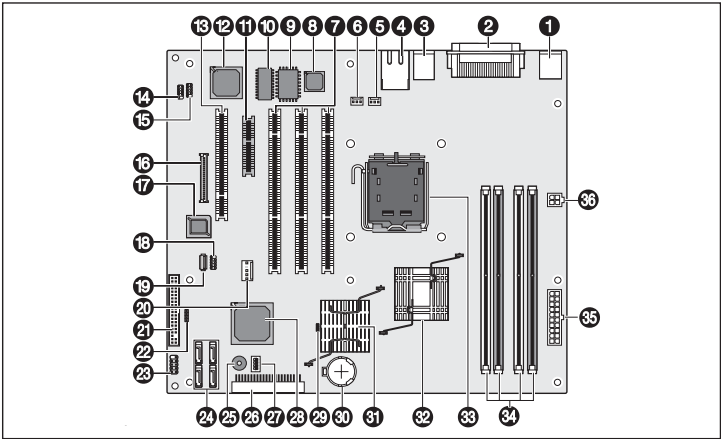


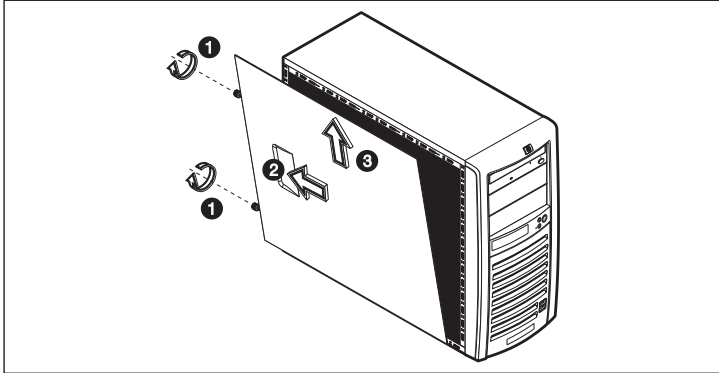
Table 3: System Board Components

Item	Code	Description
1	CN1	Top: PS/2 mouse port (green) Bottom: PS/2 keyboard port (purple)
2	CN2	Top: Parallel port (burgundy) Left: Monitor port (blue) Right: Serial port (teal)
3	CN5	USB 2.0 ports (black, two)
4	CN6	LAN port (RJ-45)
5	CN7	3-pin CPU fan connector
6	CN10	3-pin system fan connector (rear)
7	PCI1 to PCI3	64-bit/100 MHz 3.3V PCI-X bus slots (three)
8	U13	Intel GD8254IPI GbE LAN controller
9	U17	SMSC LPC47M192 Super I/O chipset
10	U18	VGA frame buffer
11	PCI4	PCI-Express x4 bus slot
12	U22	ATI Rage XL VGA chipset
13	PCI5	32-bit/33 MHz 5V PCI bus slot
14	CN22	9-pin BMC COM connector
15	CN24	9-pin extension serial connector (COM2)
16	CN20	IPMI connector
17	U34	BIOS
18	CN21	9-pin front USB connector
19	CN27	Internal USB connector
20	CN17	Internal USB connector (for internal USB tape use)
21	CN18	34-pin FDD connector
22	CN13	4-pin SCSI LED connector
23	CN16	9-pin front panel connector
24	SATA0 – SATA3	7-pin 150-Mbps SATA connectors (four)
25	BZ1	Internal buzzer
26	IDE1	IDE channel UDMA-100
27	SW1	System configuration switch (dip switch)
28	U46	Intel ICH6R chipset (south bridge)
29	JP1	PCI-X bus speed jumper Jumper setting: <ul style="list-style-type: none">1-2 – 133 MHz PCI-X bus (default)2-3 – 100 MHz PCI-X bus
30	BT1	Battery
31	U16	Intel 6702 PXH-V chipset (PCI bridge)
32	U9	Intel E7220 chipset (north bridge)
33	U10	Intel LGA775 CPU socket
34	DIMM1 to DIMM4	DIMM slots (four)
35	PWRCON2	20-pin ATX system board power connector
36	PWRCON1	4-pin ATX CPU power connector

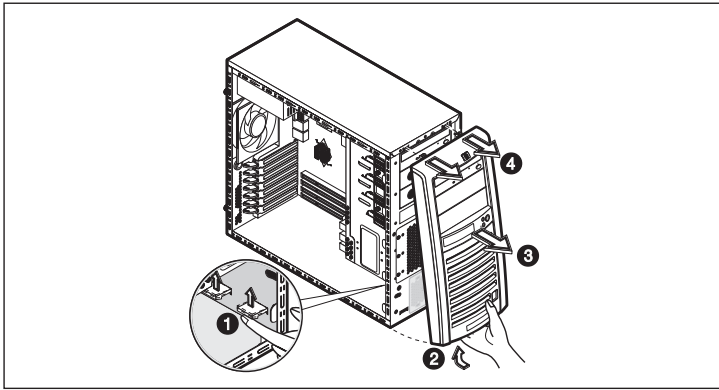
Opening the Server

The access panel and the front bezel are both detachable. You need to remove these system covers before you can remove or replace a server component.

Removing the Access Panel



Removing the Front Bezel



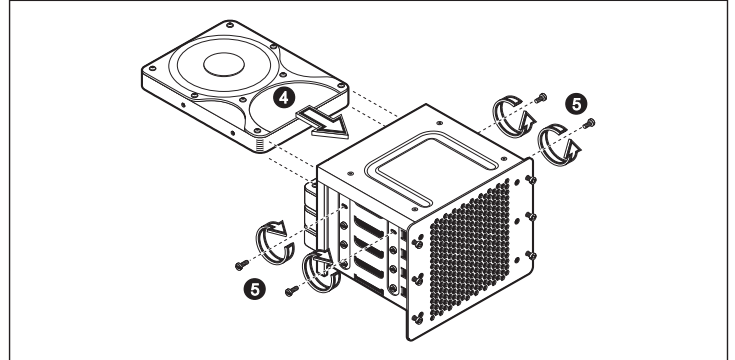
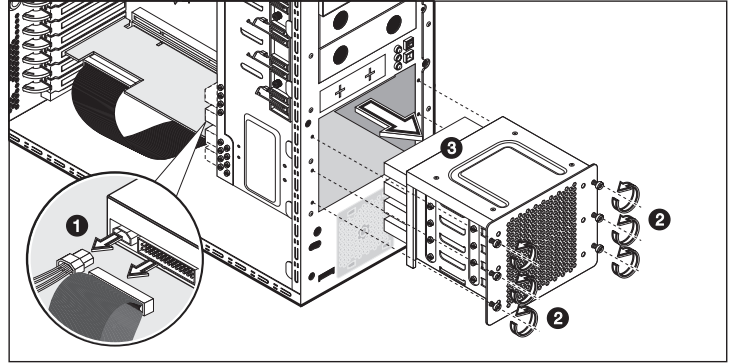
Installing Mass Storage Devices

The lower drive bay on the front panel accommodates an HDD cage for installation of up to four additional hard drives. The hot-plug HDD cage model supports SATA drives only, while the non-hot-plug model supports both SATA and SCSI drives.

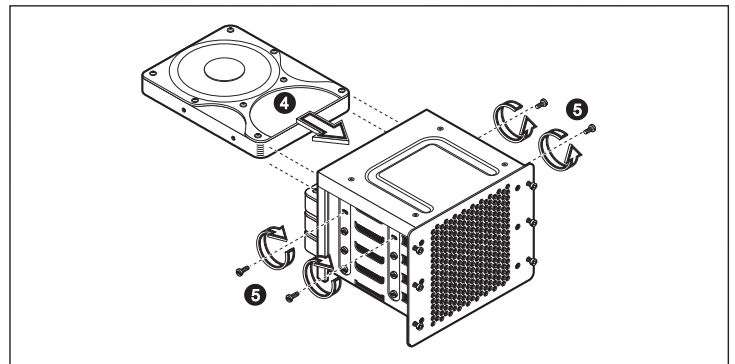
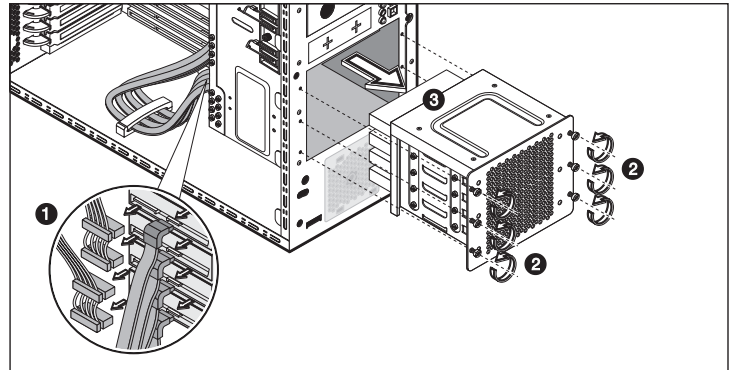
CAUTION: Drives can be damaged by static electricity. Before handling drives, touch an unpainted metal surface to discharge static electricity.

WARNING: If you are going to install a non-hot-plug drive, power down the server first.

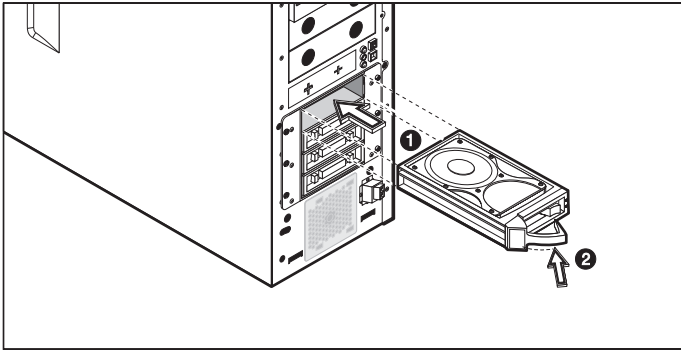
Non-hot-plug SCSI Drives



Non-hot-plug SATA Drives



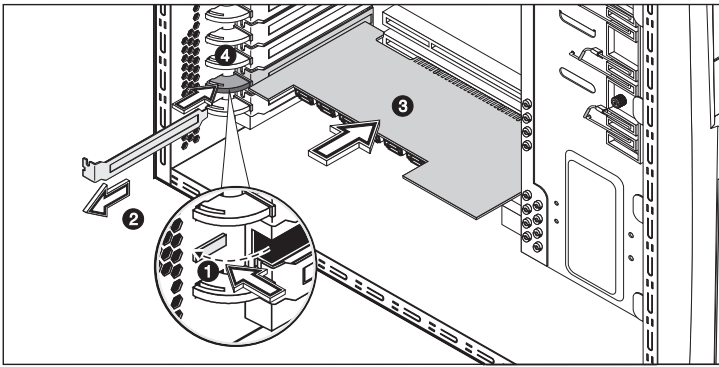
Hot-plug SATA Drives



Installing the PCI Accessory Board

The HP ProLiant ML110 Generation 2 server supports five PCI bus slots.

- Three 64-bit/100-MHz 3.3V PCI-X bus slots (PCI1 to PCI3)
- One PCI-Express x4 bus slot (PCI4)
- One 32-bit/33-MHz 5V PCI bus slot (PCI5)



Installing Memory

The HP ProLiant ML110 Generation 2 server has four DIMM slots that support up to 4 GB maximum system memory (1 GB in each of the four DIMM slots).

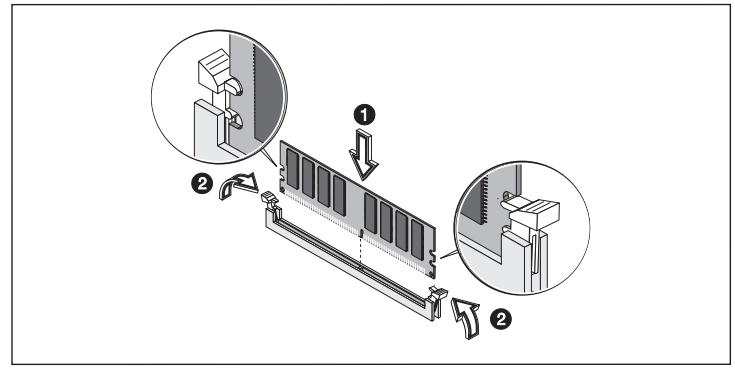
The following guidelines must be followed when memory modules are being added or replaced:

- Use only DDR 400 unbuffered ECC and non-ECC DIMMs in 256 MB, 512 MB, or 1 GB configuration.
- Up to two DIMMs per channel, single-sided and/or double-sided. Channel A corresponds to the DIMM1 and DIMM2 slots, while channel B corresponds to the DIMM3 and DIMM4 slots.



CAUTION: DIMMs can be damaged by improper handling.

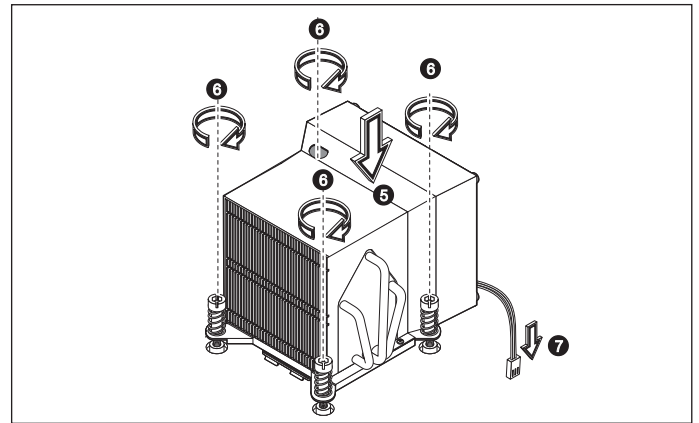
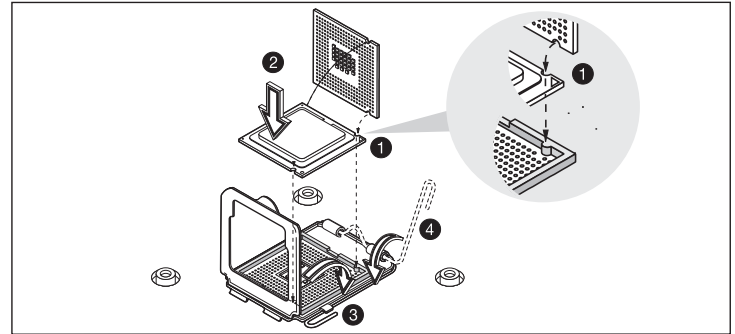
Always use an anti-static wrist strap and grounding mat, and discharge static electricity before touching DIMMs.



The DIMM slots are structured to ensure proper installation. If you insert a DIMM but it does not fit easily into the slot, you may have inserted it incorrectly. Reverse the orientation of the DIMM and insert it again.

Replacing the Processor

The LGA775 CPU socket in the HP ProLiant ML110 Generation 2 server supports an Intel® Pentium® 4 processor.



Obtaining Additional Documentation

For additional documentation, refer to the HP ProLiant ML110 Generation 2 Server Support CD. You can also access additional information and documentation from the HP website, www.hp.com either by connecting directly or through the Support CD.